

What is claimed is:

- 1           1. A method of switching a signal including the steps of:
- 2           coupling an input to output by plural stages of switching;
- 3           processing the signal switching by coding techniques in one stage of the plural
- 4 stages of switching;
- 5           processing the signal switching by timing techniques in another stage of the plural
- 6 stages of switching; and
- 7           coordinating the coding techniques and timing techniques to couple a signal at an
- 8 input port to a predetermined output port
- 1           2. The method of claim 1, wherein the processing in one stage includes;
- 2           switching by timing techniques includes a time slot interchange step; and
- 3           switching by coding techniques includes a code division step.
- 1           3. The method of claim 1, further including a step of:
- 2           despreading a code division signal:
- 3           time multiplexing the despread code division signal; and
- 4           respreading the time multiplexed signal.
- 1           4. The method of claim 1, further including a step of:
- 2           spread coding a time multiplexed signal;
- 3           code division switching the spread coded signal; and
- 4           time multiplexing the code division switched signal.
- 1           5. The method of claim 2, further including a step of:
- 2           combining signals into beams and encoding the beams with overspreading
- 3 techniques to identify a destination; and
- 4           coding individual signals to identify a particular user.
- 1           6. A time division code switch, comprising:
- 2           an input for accepting a code division modulated signal and including an input
- 3 despreader to decode the code division modulated signal;
- 4           a time slot interchanger connected to receive the decoded code division
- 5 modulated signal, the time slot interchanger re-arranging the time slots of each frame to
- 6 couple input to a designated output;

respreading circuitry connected to an output of the time slot interchanger; and  
an output for directing respread signals to their destination.

7. The time division code switch of claim 6, comprising:

a code bus for delivering CDMA beams to a plurality of despreaders at the input;

and

a summer connected to sum a plurality of spread signals having a common  
destination to form a beam directed to that destination.

8. A method of switching a signal in a communication system combining Code  
division and time multiplexing, comprising the steps of:

defining a plurality of stages of switching in which;

applying a code switching technique in at least one stage; and

applying a time switching technique in at least another stage.

9. The method of claim 8, wherein:

code switching includes a step involving code division processing; and

time switching includes a step involving time slot interchanging.

10. The method of claim 8, wherein:

code switching includes a step involving code division processing; and

time switching includes a step involving time slot multiplexing.

11. The method of claim 8, wherein a step of

code switching includes a step of despread code division modulated signals.

12. The method of claim 11 wherein:

time switching includes a step of time multiplexing the despread code division  
modulated signal.